GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:1129
ANSWERED ON:25.02.2003
DEVELOPMENT OF DROUGHT PREDICTION MODEL
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether his Ministry has evolved a drought-prediction model to predict rainfall and particularly rainfall in July, 2003 due to most critical drought faced by agriculture sector during 2002; and

(b) if so, the details thereof ?

Answer

MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) & (b): At the instance of the Department of Science & Technology, a brainstorming session was organized at Bangalore on November 28-29, 2002 to discuss the behaviour of the southwest monsoon-2002. More than 50 scientists form different scientific institutions participated in this meeting.

The monsoon season of 2002 in which the all-India monsoon rainfall was in deficit by 19% has turned out to be an intriguing season. None of the methods developed for empirical prediction, which have been reasonably successful for over a decade could predict this drought. The prediction given in May 2002, on the basis of complex atmospheric / climate models by the leading global centres, also did not suggest a drought over India.

The scientists who participated in the session concluded that predicting extremes, such as the drought, remains an extremely challenging problem. However, with further efforts in development of empirical methods and more investigations with general circulation models, the scientists expect improvements in seasonal rainfall prediction particularly for the monsoon month of July. To achieve this, a multi-pronged approach is recommended. More observations over the ocean with buoys etc. are being complemented with special observational experiments such as BOBMEX conducted over the Bay of Bengal in 1999 and ARMEX over the Arabiar Sea in 2002, and further research in atmospheric models aimed at developing a unified model which can generate robust simulations of the monsoon and its variability.